

Mobile Radio Network market investigation

Comments on issues and remedies

The current situation concerning a vital element of our secure national infrastructure is totally unacceptable and requires strong and immediate action, much of which will be beyond the remit of the Competition and Markets Authority and may require legislation.

1. Issues

- a. The nationwide monopoly of Airwave, the appointment of Motorola as contractor to provide that network, the terms of service provision and the decision not to take the network into public ownership at the end of the PFI, causing the current market situation, all result directly from decisions taken by the Government. The current market situation was therefore very highly likely, given that to avoid it would have required Motorola to operate in a way not directed towards the maximisation of profit¹.
- b. The decision to replace Airwave with the Emergency Services Network, called a network but in fact intended to be a service provided over a generalised 5G network, was based on the wrongful assumption that it existed or that it would exist in the agreed timescale. It remains uncertain that by itself it will ever be capable of fully replacing all the aspects of Airwave. Some aspects of this are affected by the nature of radio propagation at different frequencies as well as contention for priority between different service levels, so not susceptible to mere regulatory pressure.
- c. It is in the nature of the global Professional Mobile Radio industry that its products and services are designed to handle relatively low user numbers and capacity, very high levels of resilience, availability and coverage and functionality specific to the requirements of the user base, whether inherent to the service or through provision of appropriate interfaces to other information and control systems. Even within a particular user group there can be very great differences in the requirements. For example, a police radio in the Highlands of Scotland will have very different coverage priorities to those in an inner-city force. These requirements drive costs. To provide all requirements to all users everywhere is the most expensive option available. Many users will be paying for services which are either not a priority or which are not used.
- d. A very great amount of expertise exists within Airwave itself on the requirements of its users, the technical and physical challenges and which standards and specifications, whether part of public standards such as TETRA or 5G, proprietary such as owned by themselves or Motorola or user based, such as authentication, group call structures or relating to control systems or protocols.

¹ [✂]

2. Remedies

- a. Short term measures designed to control pricing and to put pressure on all the suppliers of both Airwave and ESN should be implemented to help expedite basic restructuring of the market. To the greatest extent possible this should be retrospective to cover the full period under review.
- b. Recommendations to Government
 - i. Airwave, together with all its own or licensed IP and knowhow, should be taken into majority public ownership, with minority involvement from all industry participants in the provision of mobile radio services as well as representation of all the user base². Consideration for this change of ownership should take into account any excess profits made by any of the organisations involved to date. Airwave would then become the main 'retail' outlet for continuing TETRA, prospective ESN, combined TETRA and 5G based services or other relevant services as they become available. While specific users can arrange for special overlay services to suit their needs and subject to the practicalities of any service transition, for the main services interoperability and roaming between regions as well as backward compatibility will maintain the national service offering. Airwave's governance structure should be based on combined Government, industry and user input with the objective of managing this specialist market in a more realistic, evolutionary and productive way.
 - ii. The ESN contracts should be cancelled and new ESN contracts should be entered into between Airwave and ESN providers to provide the required services on a phased and large regional basis. This will enable both a gradual move to the new technology as it becomes possible to deliver the service and development of competitive services both regionally and on an evolutionary service by service basis. It will also eliminate the very destructive effects of having a national service of this importance cease as the contract comes to an end. Knowhow and IP developed so far in the work to provide ESN should be paid for and become Airwave's to licence to future service providers or network operators.
 - iii. Other systems and services reliant on the core communications capability can be supplied to the users of the systems by interacting with the new Airwave acting as a secure and long term hub coordinating the introduction of new systems and technologies with the requirements of the users.
 - iv. Concentration of the relevant expertise in the new Airwave generates the opportunity to become an international leader in the specification and implementation of similar systems worldwide.

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² [✂]